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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/620,620 | 07/17/2003 | Hyeong Seog Kim | HI-0157 | 9656 |
| 34610 | 7590 | 07/13/2006 | EXAMINER | |
| FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153 | | | NGUYEN, TU X | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2618 | |

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,620

Applicant(s)

KIM, HYEONG SEOG

Examiner

Tu X. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11, 13, 15, 16 and 18 is/are rejected.
- 7) ☒ Claim(s) 6, 12, 14 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed May 26, 2006 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4-5 and 7-9, are rejected under 35 U.S.C. 102(b) as being anticipated by Van Bokhorst et al. (US Patent 6,192,230).

Regarding claim 1, Van Bokhorst et al. disclose a wireless communications device, comprising:

a communication sensitivity checking portion configured to check a sensitivity of at least one communications channel used to communicate with an external access point and to output a sensitivity signal (see col.2 lines 6-25); and

a power mode changing portion configured to change a power mode of the wireless communications device between a working mode and at least one sleep mode based on the sensitivity signal (see col.7 lines 49-55).

Regarding claim 2, Van Bokhorst et al. disclose the power mode changing portion is configured to change a power mode of the wireless communications device into a working mode if the sensitivity signal indicates that the communications sensitivity is greater than a

predefined reference value (see col.8 lines 44-45), and wherein the power mode changing portion is configured to change a power mode of the wireless communications device into a sleep mode if the sensitivity signal indicates that the communications sensitivity is less than a predefined sensitivity value (see col.8 lines 40-41).

Regarding claim 4, Van Bokhorst et al. disclose the wireless communications device is in the sleep mode, both a transmission portion and a receive portion of the wireless device are put in a power down mode (see col.1 lines 27-29).

Regarding claim 5, Van Bokhorst et al. disclose the power mode changing portion is configured to switch the power mode into a working mode once a predetermined time period elapses after the power mode has been switched to a sleep mode (col.5 lines 24-25).

Regarding claim 7, Van Bokhorst et al. disclose a data checking portion configured to determine whether data needs to be transmitted to an external access point and configured to output a data check signal, and wherein the power mode changing portion is also configured to change a power mode of the wireless communications device based on the data check signal (see col.6 line 42 through col.7 line 14).

Regarding claim 8, Van Bokhorst et al. disclose the power changing mode portion is configured to change a power mode of the wireless communications device into a transmission sleep mode if the data check signal indicates that there is no data to be transmitted, and wherein the power changing mode portion is configured to change a power mode of the wireless communications device into a working mode if the data check signal indicates that there is data to be transmitted (see col.2 lines 21-25).

Regarding claim 9, Van Bokhorst et al. disclose when the wireless communications device is in the transmission sleep mode, only a transmission portion of wireless communications device is in a power down mode (see col.7 lines 36-40).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Bokhorst et al. in view of Willars (US Patent 6,480,476).

Regarding claim 3, Van Bokhorst et al. fail to disclose the predefined sensitivity value can be changed by a user.

In an analogous art, variable sleep cycle, Willars discloses the predefined sensitivity value can be changed by a user (see col.8 lines 42-45). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Van Bokhorst et al. with the above teaching of Willars in order to setting the variable sleep mode based on factors of battery resource optimization, desired performance, etc (as suggested by Willars, see col.8 lines 44-45).

5. Claims 10-11, 13, 15-16 and 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Bokhorst et al. in view of Lindskog et al. (US Pub. 2002/0132603).

Regarding claim 10, Van Bokhorst et al. fail to disclose wherein the wireless communication device is a wireless LAN module.

In an analogous Art, power saving in WLAN communications, Lindskog et al. disclose wherein the wireless communication device is a wireless LAN module (see par.004). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bokhorst et al. with the above teaching of Lindskog et al. in order to provide a wireless Ethernet card driving power saving mode for a laptop computer.

Regarding claim 11, Van Bokhorst et al. disclose a wireless LAN communication, comprising:

checking means for checking a communication sensitivity of at least one communications channel (see see col.2 lines 6-25);

switching means (see 44, fig.2) for switching a power mode of the wireless LAN module to a power down mode if the checking means determines that a communication sensitivity is less than a predefined sensitivity value, and wherein the switching means is also configured to switch the power mode of the wireless LAN module to a normal mode after a predetermined delay period elapses after the power mode has been set to the power down mode (see col.8 lines 29-45).

Van Bokhorst et al. fail to disclose wherein the wireless communication device is a wireless LAN module.

In an analogous Art, power saving in WLAN communications, Lindskog et al. disclose wherein the wireless communication device is a wireless LAN module (see par.004). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bokhorst et al. with the above teaching of Lindskog et al. in order to provide a wireless Ethernet card driving power saving mode for a laptop computer.

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Regarding claim 13, the modified Van Bokhorst et al. disclose the switching means is configured such that if the checked communication sensitivity is more than the predefined sensitivity value, a power mode of a transmission block of the wireless LAN module is set to a power down mode if no data needs to be transmitted by the wireless LAN module (see Van Bokhorst, col.4 lines 29-31).

Regarding claim 15, Van Bokhorst et al. disclose a wireless LAN communication, comprising:

setting up a communication channel of a wireless LAN networks (see col.8 lines 35-36);
checking a communication sensitivity of the set channel (see col.8 lines 36-37); and
changing a power mode of the wireless LAN module to a sleep mode if the results of the checking step indicate that the communication sensitivity is less than predetermined sensitivity value (see col.8 lines 39-41).

Van Bokhorst et al. fail to disclose wherein the wireless communication device is a wireless LAN module.

In an analogous Art, power saving in WLAN communications, Lindskog et al. disclose wherein the wireless communication device is a wireless LAN module (see par.004). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bokhorst et al. with the above teaching of Lindskog et al. in order to provide a wireless Ethernet card driving power saving mode for a laptop computer.

Regarding claim 16, the modified Van Bokhorst et al. disclose changing a power mode of the wireless LAN module back to a working mode after a predetermined delay period expires

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after the wireless LAN module is set to the sleep mode (see Van Bokhorst et al., col.8 lines 44-45).

Regarding claim 18, the modified Van Bokhorst et al. disclose checking to determine if data must be transmitted by the wireless LAN module (see Van Bokhorst, col.4 lines 29-30); and changing a power mode of a transmission block of the wireless LAN module to a sleep mode if the results of the checking step indicate that no data must be transmitted (see Van Bokhorst, col.4 lines 29-31).

Allowable Subject Matter

6. Claims 19-20 are allowed.

7. Claims 6, 12, 14 and 17, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding dependent claim 6, the prior arts fail to teach “the length of the predetermined time period varies based on the value of the predefined sensitivity value”, as cited in the claim.

Regarding dependent claim 12, the prior arts fail to teach “the predefined sensitivity value is approximately 70 percent”, as cited in the claim.

Regarding dependent claims 11 and 17, the prior arts fail to teach “if the checking means determines that a communications sensitivity is less than a predetermined sensitivity value, the switching means switches the power mode of the wireless LAN module to a normal mode after a first predetermined delayed period elapses after the power mode has been set to the power down mode, and wherein the checking means determines that a communications sensitivity is

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less than a second predetermined sensitivity value, the switching means switches the power mode of the wireless LAN module to a normal mode after a second predetermined delay period elapses after the power mode has been set to the power down mode", as cited in the claims.


Regarding dependent claim 19, the prior arts fail to teach "changing a power mode of the wireless LAN module to a power down mode if the result of the checking step indicates that the channel was not properly set up", as cited in the claim.

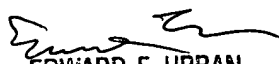
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 571-272-7883. The examiner can normally be reached on Monday through Friday from 6:30AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


June 26, 2006


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